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10/606,430

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Chan-Soo Hwang

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EXAMINER

MOORE, IAN N

ART UNIT

PAPER NUMBER

2616

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08/24/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/606,430	Applicant(s) HWANG ET AL.	
	Examiner Ian N. Moore	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 15 is/are rejected.
- 7) ☒ Claim(s) 2-14, 16-19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Drawings*

1. The drawings were received on 8-6-07. These drawings (**FIG. 16-17**) are accepted by the examiner.
2. The drawings (**FIG. 2,8,10 and 11**) are still objected to because there is a lack of descriptive text legends for FIG. 2,8,10 and 11 (e.g. in FIG. 2, “42” should be labeled as “symbol 42”, “A” should be labeled as “length A”) [see 37 CFR 1.83, CFR 1.84 [5(O)], MPEP § 608.02(e)]. (*Note- this issue has been raised in the previous action*).

The objection to the drawings will not be held in abeyance.

### *Claim Objections*

3. Claims 6-10 are objected to because of the following informalities:

**Claim 6** recites, “**a micro format**” in line 11. For clarification and consistently with It is “a micro format” recited in line 6, it is suggested to revise “a micro format” recited in line 11 as “another micro format”, “other micro format”, or equivalent thereof. (*Note- this issues has been raised in the previous action*).

**Claim 7** recites, “**a micro format**” in line 6. For clarification and consistently with It is “a micro format” recited in line 3, it is suggested to revise “a micro format” recited in line 6 as “another micro format”, “other micro format”, or equivalent thereof. (*Note- this issues has been raised in the previous action*).

**Claims 8-10** are also objected since they are depended upon the objected claim 6 set forth above.

Appropriate corrections are required.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van (EP 0869647) in view of Kostic (US007079503B2).

**Regarding Claim 1**, Van discloses an orthogonal frequency division multiplexing (OFDM) communication method (see FIG. 1, OFDM transmitter is performing processes/methods) to adapt to channel characteristics, comprising the steps of changing at least one of a length of a transmission symbol (see page 3, line 24-31; symbol duration/length (Ts)), a format of a frame (see page 3, line 24-31; number of carriers (N) in a frame), and a format of the transmission symbol (see page 3, line 24-31; number of bits per symbol) depending on a type of the transmission symbol in which communication is performed (see FIG. 1, per received input/indication/signal from dynamic rate control 15 which indicates the category/type/sort of received symbol for communication; see page 3, line 24 to page 5, line 47).

Although Van discloses a symbol duration/length is adjusted/scaled, which is, used as guard time/interval (see page 3, line 24-31), Van does not explicitly disclose a radius of a cell. However, it is well known in the art that a symbol duration/length is adjusted/scaled according to

as guard time/interval to compensate propagation delay. In particular, Kostic teaches determining according to a radius of a cell (see col. 4, line 10-44; determining according to cell radius (1, 2,5,10 km)). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a radius of a cell, as taught by Kostic in the system of Van, so that it would provide wireless services efficiently; see Kostic col. 2, line 29-33; see col. 3, line 25-26.

**Regarding Claim 15**, Van discloses an orthogonal frequency division multiplexing (OFDM) communication apparatus (see FIG. 1, OFDM transmitter) to adapt to channel characteristics, comprising:

a symbol inspector (see FIG. 1, Dynamic Rate Control 15), for inspecting a type of a transmission symbol (see page 4, line 9-36; determining/evaluating category/type/sort of received symbol) and outputting the result of the inspection as a first control signal (see FIG. 1, responding the evaluated/determined scaled/adjusting input/indication/signal to a combined system of coding 14, IFFT 16 and cyclic prefix and windowing 18); see page 4, line 16 to page 5, line 34); and

a symbol and format converter (see FIG. 1, a combined system of coding 14, IFFT 16 and cyclic prefix and windowing 18), for changing at least one of a length of a transmission symbol (see page 3, line 24-31; symbol duration/length ( $T_s$ )), a format of a frame (see page 3, line 24-31; number of carriers ( $N$ ) in a frame), and a format of the transmission symbol (see page 3, line 24-31; number of bits per symbol) in response to the first control signal in which communication is performed (see FIG. 1, per received input/indication/signal from dynamic rate control 15 for communication; see page 3, line 24 to page 5, line 47).

Although Van discloses a symbol duration/length is adjusted/scaled, which is, used as guard time/interval (see page 3, line 24-31), Van does not explicitly disclose a radius of a cell. However, it is well known in the art that a symbol duration/length is adjusted/scaled according to as guard time/interval to compensate propagation delay. In particular, Kostic teaches determining according to a radius of a cell (see col. 4, line 10-44; determining according to cell radius (1, 2,5,10 km)). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a radius of a cell, as taught by Kostic in the system of Van, so that it would provide wireless services efficiently; see Kostic col. 2, line 29-33; see col. 3, line 25-26.

***Allowable Subject Matter***

3. **Claims 2-14 and 16-19** are objected to as set forth in paragraph 2 and being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Argument***

4. **Regarding claims 1-17**, the applicant argues that “**adapted to**” is not optional languages in theses claims...” in page 10.

**In response to argument**, examiner acknowledges the applicant admission that “adapted to” is not optional language in theses claims, this is, the method steps and apparatus that performs the functional steps, which follows the “adapted to” clause are “**NOT OPTIONAL**” or

“REQUIRED” steps/function. In other word, the steps which follow the “adapted to” clause must be performed since they are not optional.

5. Applicant's arguments filed 8-9-2007 have been fully considered but they are not persuasive.

**Regarding the drawings objection, the applicant argues that “...Figures 2,8,10 and 11 are acceptable as filed...in a form recognized by those skilled in this technology” in page 2.**

**In response to the applicant arguments**, examiner respectfully disagrees with the applicant argument above. The square boxes with “no descriptive text label” forms presented by the applicant in the FIG. 2,8,10 and 11 is not in the form that recognized by those skilled in this technology from viewing the drawings.

**MPEP § 608.02(e)** discloses that **Examiner determines completeness and consistency of drawings**. Thus, it is clear in accordance with MPEP which states that the “examiner”, **NOT the applicant**, determines the completeness and consistency of drawings [emphasize added]. In this case, examiner has determined that the drawings are **incomplete**.

The applicant attention is also directed to **37 § C.F.R 1.84 [5(O)]**, which states “**Suitable descriptive legends may be used subject to approval by the Office, or may be required by the examiner where necessary for understanding of the drawing. They should contain as few words as possible.**” In this case, examiner is clearly requiring the applicant to include “suitable descriptive legends” that is necessary for the understanding for the drawings since the drawings are **incomplete**.

Moreover, the examiner is requiring this application, which has the incomplete or un-presentable form of drawings, to be in the best presentable and complete form for the public

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including patent community, who will appreciate the completeness of this application once published or issued.

Therefore, the objections to the drawings stand objected as set forth previous and above. The objection to the drawings will not be held in abeyance.

**Regarding claims 1 and 15**, the applicant argues that "...changing at least one of a length of a transmission symbol, a format of a frame, and a format of the transmission symbol depending on a type of the transmission symbol and a radius of a cell, in which communication is performed... Van does not disclose the type of the transmission symbol claimed in claim 1 and 15 as defined in the specification... Kostic does not cure the deficiencies of Van..." in page 10.

**In response to argument**, examiner respectfully disagrees with the applicant argument above.

Van discloses an orthogonal frequency division multiplexing (OFDM) communication method (see FIG. 1, OFDM transmitter is performing processes/methods) to adapt to channel characteristics, comprising the steps of changing at least one of a length of a transmission symbol (see page 3, line 24-31; symbol duration/length ( $T_s$ )), a format of a frame (see page 3, line 24-31; number of carriers ( $N$ ) in a frame), and a format of the transmission symbol (see page 3, line 24-31; number of bits per symbol) depending on a type of the transmission symbol in which communication is performed (see FIG. 1, per received input/indication/signal from dynamic rate control 15 which indicates the category/type/sort of received symbol for communication; see page 3, line 24 to page 5, line 47). Van discloses a symbol duration/length is adjusted/scaled, which is, used as guard time/interval (see page 3, line 24-31). It is well known in the art that a



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symbol duration/length is adjusted/scaled according to as guard time/interval to compensate propagation delay. In particular, Kostic teaches determining according to a radius of a cell (see col. 4, line 10-44; determining according to cell radius (1, 2,5,10 km)).

Thus, it is clear that the combined system of Van and Kostic discloses the applicant claimed invention.

**In response to argument** to the applicant specification, every single limitation recited in the specification is not recited in the claim. Thus, it is the argument is irrelevant. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N. Moore whose telephone number is 571-272-3085. The examiner can normally be reached on 9:00 AM- 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571-272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ian N. Moore  
Examiner  
Art Unit 2616



8-13-07



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